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ABSTRACT

Exercise addiction may be defined as psychological and/or physiological dependence upon a regular regimen of physical activity. Additionally, exercise addiction is characterized by recognizable withdrawal symptoms when the need to exercise remains unfulfilled after 24 to 36 hours. These withdrawal symptoms may encompass both psychological and physiological factors. The depth interview approach was used because of the flexibility of the technique in permitting close examination of the interviewee's responses to a broad range of questions, including the reasons for running, roles as a runner, the importance of running, specifics on extent and frequency of participation, motivational considerations, and exercise addiction. Most participants interviewed ran for reasons of general health, staying in shape, keeping body weight down, and relaxation. Those addicted to running viewed the running role as important and as a significant part of their lives. Participants saw themselves as motivated to continue running because of their addiction to running and their acceptance during the period from January to May. The observers recorded student time within the subject matter areas of reading and mathematics, focusing on the content of student instructional tasks, the degree of difficulty of instructional tasks, and student engagement in those tasks. Academic Learning Time (ALT) is defined as time on tasks of intermediate difficulty for the students, directly related to the measures of achievement under study, during which a student is engaged in the instructional task. (Author)

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Examining Exercise Addiction: A Depth Interview Approach[1,2]

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RUNNING HEAD: EXERCISE ADDICTION

SP 012 833

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Abstract

Exercise addiction may be defined as psychological and/or physiological dependence upon a regular regimen of physical activity. Additionally, exercise addiction is characterized by recognizable withdrawal symptoms when the need to exercise remains unfulfilled after 24-36 hours. These withdrawal symptoms may encompass both psychological and physiological factors, including feelings of irritability, tension, guilt, uneasiness, and bloatedness.

The depth interview approach was employed in examining the concept of exercise addiction. This approach was used because of the flexibility of the interview technique in permitting close examination of the interviewee's responses to a broad range of questions. Twelve adult males (ages 23-48), all runners, were interviewed.

A wide range of questions covering the reasons for running, roles as a runner, the importance of running, specifics on extent and frequency of participation, motivational considerations, exercise addiction, and other areas, were included in the interviews. Most participants ran for reasons of general health, staying in shape, keeping body weight down, and relaxation. Those addicted to running viewed the running role as important, and as a significant part of their lives. Feelings of relaxation and accomplishment upon finishing a run were characteristically reported. Participants saw themselves as motivated to continue running, because of their addiction to running and their acceptance of the fact that running is one of the most efficient ways to maintain a healthy cardiovascular system. Participants discussed the withdrawal symptoms experienced when running was not possible.

Responses to other interview questions were assessed, and suggestions made for future use of the interview approach and further research directions in exercise addiction.

Recently, running has become a popular physical, participant activity. Runners may be seen on the roads, tracks and by-ways of our nation at almost any time of day. Understandably, a concomitant increase in research publications relative to running has also been observed, with particular reference to distance or endurance running. For example, volume 301 of the Annals of the New York Academy of Sciences, (Milvy, 1977) deals exclusively with the marathon race and includes papers representing various scientific disciplines and sub-disciplines such as medicine, physiology, epidemiology, and psychology.

Frequency of participation in physical activity varies individually with exercisers, and ranges from sporadic, infrequent involvement to inviolate and stubborn regularity. As available leisure time increases for large numbers of individuals, recreational and sport activities have gained greater importance in their lives, are contemplated with greater sincerity, and dealt with on more studied levels.

This paper is primarily concerned with individuals whose commitment to a particular sport or physical activity is both well defined and intense. The term exercise addiction is applied herein to persons who demonstrate psychological and/or physiological dependence upon a regularly experienced regimen of physical activity (e.g., playing a sport or performing related aspects of a sport, performing calisthenics, running, swimming, lifting weights). In these individuals the unsatisfied need or desire to experience such activity produces withdrawal symptoms. Specifically, withdrawal signs are associated with periods of greater than 24-36 hours which are devoid of opportunity for participation or in

which one is physically unable to participate.

Pargman and Burgess (note 2) examined both psychological and physiological perspectives in proposing a psychobiological explanation of exercise addiction. However, most researchers have been concerned with psychological and/or physiological changes attributed to a specific physical activity such as running, rather than the concept of exercise addiction per se. To say the least, the literature in both areas is meager.

Reported research findings in exercise physiology indicate that vigorous physical activity produces both biochemical and physiological adaptations in the body (Guyton, 1971; Karpovich & Sinning, 1971). These adaptations generally result from relatively intense exercise over long periods of time, with concomitant increases in physical stress. Such physiological changes, as an improvement in the efficiency of the cardiovascular system, appear to be closely related to claims made by regular exercisers that they feel better after physical activity. A number of studies have indicated that exercisers find workouts invigorating and refreshing, and that these daily exercise periods relieve tension, provide relaxation and improve sleep (Baekeland & Lasky, 1966; Gary & Guthrie, 1972; Graham, 1966). These feelings may be so intense and addicting that one researcher (Baekeland, 1970) encountered difficulty in recruiting regular exercisers for a study in which they would not exercise for an extended period of time. Even financial incentives failed to motivate potential subjects to participate in Baekeland's

research. Indeed, "many prospective Ss (especially those who exercised daily) asserted that they would not stop exercising for any amount of money." (p. 365)

The psychosocial perspective has also yielded a number of research efforts related to exercise addiction. Several researchers (Brunner, 1969; McPherson, Paivio, Yuhasz, Rechnitzer, Pickard, & Lefcoe, 1965) have indicated that the feeling of well being associated with exercising is a strong motivator for continued participation in regular physical activity. Other terms have been used to describe this addiction, including 'compulsion' (Abell, 1975) and 'positive addiction' (Glasser, 1976). Glasser's work is essentially an examination of addictions which he considers to be psychologically and physiologically supportive. He calls these positive addictions, in contrast to negative addictions to agents such as drugs. While Glasser's work is not scientifically based in the sense of rigorous experimental design and statistical analysis, it includes useful clinical and psychiatric assessments. Glasser reports a general feeling of "high" or euphoria experienced by regular runners or joggers. He has extended his work into the physiological realm in recent research (Glasser, 1978), and suggested that a naturally addicting chemical called enkephalin might be "the 'heroin' of all the positive addiction activities" (p. 2).

A considerable number of studies have involved examination of personality traits in runners and joggers (Buccola & Stone, 1975; Burgess, note 1; Clitsome & Kostrubala, 1977; Dienstbier, 1978; Gary & Guthrie, 1972; Gontang, Clitsome, & Kostrubala, 1977; Hartung & Farge, 1977; Ismail & Trachtman, 1973; Ismail & Young, 1973, 1976, 1977a, 1977b;

Jette, 1975; McPherson, Paivio, Yuhasz, Rechnitzer, Pickard, & Lefcoe, 1965; Morgan & Costill, 1972; Morgan & Pollock, 1977; Morgan, Roberts, Brand, & Feinerman, 1970; Young & Ismail, 1976a, 1976b, 1977). Evidence exists that personality changes may occur over a period of time in which participation in a running program occurs. Emotional stability, imaginativeness, and self-sufficiency (Ismail & Trachtman, 1973), conscientiousness and persistence (Young & Ismail, 1976a), and seriousness (Buccola & Stone, 1975), are among the personality traits which appear to increase in strength.

A potentially significant and fascinating line of research involves the use of running as a treatment in psychotherapy (Kavanagh, Shephard, Tuck, & Qureshi, 1977; Kostrubala, 1976, 1977; Muller & Armstrong, 1975; Orwin, 1973, 1974; Stamford, Hambacher, & Fallica, 1974). In particular, the research efforts of Kavanagh and Kostrubala have provided strong indications that running may be a viable treatment modality for certain mental illnesses, particularly some forms of depression.

Pargman and Burgess (note 2) have discussed a number of theoretical frameworks that may explain the dynamics of exercise addiction. Included are the drive reduction model of Freud, Petrie's augmentation-reduction model, Eysenck's conceptualization of extraversion-introversion, and the opponent-process theory of motivation. These theories relate primarily to drive reduction and stimulus seeking interpretations of the phenomenon of exercise addiction. The literature cited in Pargman and Burgess provides a comprehensive view of these primarily quantitative approaches to the study of exercise addiction. Typical of these studies is that of Burgess (note 1), who examined the hypothesis that stimulus seeking and

extraversion underlie the concept of exercise addiction.

While these quantitative approaches are certainly an integral part of advancement towards an understanding of exercise addiction, few studies (such as Glasser's work) have used a qualitative approach in this area. Research in sport psychology has used quantitative methodology almost exclusively, with only occasional examples of research employing qualitative methods (such as Cialdini, Borden, Thorne, Walker, Freeman, & Sloan, 1976, Kukla & Pargman, 1976; Russell & Drewry, 1976). While the sociological literature contains numerous examples of research using unobtrusive measures (Webb, Campbell, Schwartz, & Sechrest, 1966), the use of qualitative approaches in psychology in general, and sport psychology in particular, has not been as prevalent as might be expected.

While some of the research summarized in Pargman and Burgess, and briefly in the preceding paragraphs, has provided a view of exercise addiction with a focus towards confirming a number of hypotheses concerning the phenomenon, few studies have attempted to define the concept precisely from the addicted person's point of view. Of the numerous methodological approaches in qualitative research, including simple observation, participant observation, unobtrusive measures, interviewing, case studies, and so on, the depth interview appears to provide an excellent means of studying the concept of exercise addiction.

Method

The depth interview was used in examining the concept of exercise

addiction in this study. Wiseman and Aron (1970) provide an analysis of the purposes, advantages and disadvantages of using depth interviews in sociological research. Their definition of depth interviews as an exploratory tool to aid in locating important information for further study, jibes with the purpose of this investigation. Additionally, in this study the depth interview serves as an end in itself, to obtain detailed descriptions and explanations of certain types of behaviors associated with exercise addiction. The interview procedure allows the researcher to probe the interviewee's concepts, the intricacies of the individual's responses, and the relationship of the person's feelings to other areas of social existence.

Advantages provided by the depth interview in this study are the flexibility of the interview technique in allowing for probing and close examination of the interviewee's responses, and the development of hypotheses and categories in the course of the investigation (somewhat along the lines advocated by Glaser and Strauss, 1977). However, a number of disadvantages should also be noted. The approach is time consuming, particularly in the analysis and interpretation of the interview after the session has ended (see Lofland, 1971). Secondly, there is the difficulty of quantifying and organizing the data collected in structural ways. Finally, there is the possibility that the interviewee will be unable to verbalize his 'true' reasons for decisions, actions, and behavior.

The qualities of the depth interview technique in providing the flexibility for a thorough examination of the phenomenon of exercise addiction, however, were felt to outweigh the disadvantages of the

method.

Participants

Participants were 12 adult males from the Florida State University (Tallahassee, Florida) community, ages 23-48. The quantity and quality of the running of the individuals was varied, from those who ran occasionally and also participated in other activities, to those who ran exclusively, with relatively high mileage and rapid speeds.

Procedure

Face sheets (Lofland, 1971) were used for each interview, and included name, place and time of interview, name of interviewee, birthdate, place of birth, length of time in Tallahassee, educational background, occupation, and data on frequency and duration of run. Participants were interviewed at a time and place convenient to their personal schedules. Participants will be referred to throughout this paper by their initials.

A list of questions provided the general structure for the interview, with an indication that the interviewer might include additional questions and probes during the course of the interview to clarify points or introduce a new area. A listing of these questions is provided in Appendix A, and the questions were asked in the order listed on the sheet. Additional questions (probes) were introduced on occasion, in order to delineate more precisely the feelings of the participants about running, and to examine in greater detail the concept of exercise addiction. A further area of interest, concerning peak experiences during running

(times of great strength, grace, and euphoria), was later added to most of the interviews.

Findings

The first interview question dealt with how and why the participants initially began running. Answers to this question were varied, although responses expressed by most participants related to health, staying in shape, and keeping weight down. JB and TM both began running while in the Armed Services, JB to get in shape for the extensive physical testing which Marine Corps personnel undergo, and TM on the beaches of Vietnam to lose weight and maintain a previously achieved level of physical conditioning. DP found that he was good at running as a child, and ran track in college, staying with running since that time. KH was prompted to start running by his roommate's involvement in running and by a desire to quit smoking. In some cases other individuals were of importance in motivating the participant to begin running. PD ran because of his co-worker's participation, DM because of a colleague's involvement, and LW changed from a jogger to a serious runner through his son's activity.

The length of time participants had been running ranged from 1 1/2 to 25 years. Attitudes concerning successes in running appeared to be similar for most of the participants, encompassing feelings of success in being able to run long distances, increasing the distance run (mileage), and running with less effort. KH spoke of going "8-10 miles without stopping." PD spoke of "building up to 5 miles." DP, MS, DM and DS all mentioned successes of an externally based nature. DP won a number of

varsity letters in his college career, and occasional t-shirts in local road races. MS indicated success in winning 25 t-shirts in the past 2 1/2 years in local races. DM and DS both indicated winning trophies in their age groups and being competitive in their age division. In addition to these external considerations, however, DP mentioned a sense of fulfillment that was gratifying.

Participants were notable in expressing an absence of failure experiences in running. MA and DS both indicated frustration when they were unable to participate for a period of time, and DM and LA mentioned failures in completing a particular race and breaking a desired time goal, respectively. Mention was made of minor problems with knees, ankles, hamstrings, shin splints, and the like, but no major injuries due to running.

One of the key areas of interest was the question of why participants ran. Responses tended to involve, for the most part, factors of health, relaxation, and keeping in shape. KH, for example, gave these reasons:

> I run for my health, I run for enjoyment ... Because I feel the progress that I've made in getting myself into shape, and feel that if I work a little bit harder I can get into better shape. The shape that I've gotten into has been rewarding for me, so I figure if I work a little bit harder I can get that much more reward.

DP expressed a number of reasons that the other participants also found important:

> I run - I'm not exactly sure why - but I've felt that running is an alternative to the feelings of guilt and anxiety that develop within me when I don't run. It's easier to go out and do the run than cope with the feelings of unhappiness and guilt that well within me when I don't run. I also believe that my cardiovascular and cardio-respiratory system are benefited through my regular participation in distance running. In other words, I run to keep in shape as well.

A number of the participants emphasized considerations of feeling better, of relaxing and getting away from things. LA indicated that running keeps him sane, that it is the "single most important factor in reducing anxiety." Similarly, LW runs partly as a contrast to the reading and writing his profession requires, essentially sedentary activities. DM indicated that he felt lousy if he didn't run, and that there was a feeling of gratification in running races and continuing to improve. DS mentioned liking the people he ran with, and the chance to meet people with different views on life and of different social statuses, and mixing freely with all these individuals.

PD noted the daily contact and companionship of the people he runs with, as well as the peer pressure from his co-worker to run regularly. He expressed a desire to "keep my body tone at a level where I wouldn't be ashamed to walk around without a shirt on." MS expressed similar

general concerns of maintaining and increasing cardiovascular efficiency, the pleasures of getting away from it all for a while, the interactions with other members of the fraternity of runners, and the need for the regular and efficient exercise from a running program.

There were differences among participants in responses to questions concerning their role as a runner, integration of the running role with other roles, and the significance of the running role. Most of the participants viewed the running role as important, and as a significant part of their lives. DM and LA, for example, indicated that they would make changes in their lifestyle and give up other leisure pursuits to accommodate their running. Participants generally viewed the running role as integrated with the other roles they assumed. JB viewed the running role as particularly integrated with his other roles:

> As far as a role ... it allows me to do a lot of other things that I would like to do as far as physical activities. I guess it does a lot of things for me ... I feel like I know myself as a person a lot better because of all the hours I spend on the road running. I feel like I'm better at my other roles as a student, as a teacher, as a parent, just because of the relaxed moral state I feel after I've been running. It is definitely integrated with the other roles I assume, by all means. It probably has as much effect on my other roles in life as eating or sleeping does.

KH indicates that:

> I see myself as a person who began jogging, who now is beginning to

> take it all pretty seriously. It's becoming to dominate my out of work activities ... In essence, separate than the other roles I assume in my day to day life, but it's uh ... since it's been such a part of me, it's never really too far away from the way I am during the day.

Most of the runners saw running as being very important in their lives. JB said: "What is the estimate of the importance of running? Extremely important." KH indicated that "it's the most important hobby that I do. I see it as somewhat of an obsession." DP felt that:

> Running is kind of important to me in my life. I guess when you do anything regularly for a long period of time you permit it to become important, and if it were not important it would not become built into my pattern of living, and my style of life. And so on a very empirical basis it apparently is important.

There were few differences among individuals concerning feelings during and after running. Participants occasionally spoke of thinking about their body while they ran, concentrating on the pace, and how they felt. These feelings varied within individuals, however. KH "think(s) about how I'm feeling, the regularity of my breathing," although at times he expressed the feeling of his mind floating, almost a lack of consciousness. JB differentiated between running in a race, where his thoughts are on his body and the pace, and running in training. In training thoughts depended on the daily routine and the demands on time that day:

> If I have a lot of things to do, and especially if I've had a lot of paper work to do or know that I have a lot of paper work to do, then when I'm running it's like a time to sort things out and try to plan the day for the rest of the day as to what I'll accomplish. I really honestly believe that probably the most creative thinking and the best thinking that I do is when I'm running. I believe over the last two years in my schoolwork that I probably have come up with more ideas and written more papers when I was running than all the library time combined ... there are other nice days when you're not facing pressing demands and on those days I usually try to go someplace off the road where I can really enjoy that.

This ability to think creatively while running was shared by only one other runner, however (LW). Most participants agreed with DP that "While I'm running my basic feelings are concerned with my body." Most of the participants agreed with JB's feelings on finishing running:

> That's probably one of the nicest times for anybody that's a runner. When you finish, and this tremendous feeling of relaxation - there's nothing better than the shower after running in 90 degree humidity around Tallahassee. You feel like you've accomplished something.

Feelings expressed when participants could not run, for whatever reason, were of particular interest. LA indicated that there was really something missing, and noted an increase in anxiety levels and problems with coping. LW indicated that he didn't feel as good, felt more jumpy

and couldn't concentrate as much. He noted that he didn't need as many breaks from work when he exercised, that he might waste as much time taking breaks if he didn't run, as if he had gone out and ran. DS felt that he had missed part of the day if he couldn't run, that he had not done something he should have done. DM would begin thinking of the next time he could run, and noted feelings of restlessness. In general, participants noted feelings of anxiety, restlessness, and discomfort when they could not run.

Motivational considerations jibed with the feelings expressed earlier concerning why the individuals ran. There were additional considerations, however, for some of the participants. For KH, running has become an obsession, an avenue to health, keeping fit, and physical fitness. It also serves as a "status symbol," with pleasure in knowing that he is in better shape than 98% of the population. JB's motivation was external at first, with getting in shape for the Marines and a desire to avoid a history of heart trouble in his family. While these considerations are still present, running has become purely enjoyment, relaxation. MA saw himself as a high need achiever, overcoming difficulties and meeting goals through his runs. Health reasons and the fact that his father was overweight also serve to motivate MA. Oher concerns expressed were with conditioning, weight loss and control, and the chance to relax during the day. LW mentioned the desire to follow the Greek ideal of a sound mind in a sound body. LA noted one of the motivational considerations behind running as the "intimate relationship between psychological and physical relaxation that running gives you."

The concept of exercise addiction was examined in a series of

questions. Most of the participants saw themselves as addicts (only two indicated they were not addicted). KH saw running as an absolutely necessary part of his existence, that he would change his schedule to meet that need. He viewed the concept of exercise addiction as "when you see exercise (as) an absolutely necessary part of your life," and classified himself as a running addict. JB had read Glasser's (1976) book on positive addiction and subscribed to Glasser's approach to the concept of exercise addiction. JB felt that:

> To me, exercise addiction means that exercise has become a part of your life just as eating and sleeping and all the other basic needs that you have are a part of your life. And that if you were to remove that for one reason or another, it brings almost some type of a mental or physical change in you.

JB indicated feeling fidgety and irritable, and feeling bloated if 36 hours had passed without his being able to run. DP viewed exercise addiction as "a strong compulsion to participate in the particular physical activity that one is involved in." For DP that activity is running. MA indicated that "I've got it," as did DS and LW.

Exercise addiction means a looking forward to exercise, a wanting to participate and feeling guilty if one does not exercise. For these individuals, these feelings became manifest at different times. All the addicts became addicted early in their running 'careers', frequently after a few months of participation. LA noted that he was not really addicted to the physical aspect of participation alone, but also to the psychological well-being that comes with running. TM defined exercise

addiction as:

> An individual being so tied to the experiences of daily frequent exercise, that it is critical to his daily existence, for individual happiness, to take part in daily exercise.

A number of participants indicated having experienced peak experiences while running, times of great strength and grace. DP has experienced this feeling once:

> And no matter how fast I ran, I just had this unusual feeling of great strength, great grace. I felt that I was just flying and soon I felt something extremely peculiar. As if my legs were just working on the road without me, and just pumping away.

Similar sentiments were expressed by other runners, with an expression of impatience in awaiting the return of such feelings in future runs.

Discussion

The findings of this study provide an interesting picture of the exercise addict. There were many more similarities than dissimilarities in the responses of the runners to the series of questions. However, these differences suggest that, although it is possible to produce a general psychological description of the exercise addict, considerable variability exists in individual attributes which tend to impede sweeping characterizations.

Motivations for initiating participation were varied, but generally represented influences from other individuals or concerns of general

health, staying in shape, and keeping weight down. Answers concerning successes and failures were similar across participants, although some participants made specific note of extrinsic rewards, such as trophies and t-shirts, while others mentioned only intrinsic factors.

Motivation for continuation of running programs was also varied. Reasons similar to those underlying initiation of programs were present, but attention was additionally focused on psychological considerations such as feeling better, relaxing, and getting away from things. Also reported were social aspects of racing, such as meeting other runners at races, talking with them, and competing against them.

General agreement was expressed concerning the importance of running in the participants' lives. In a number of cases, other activities would be structured around running, and other leisure pursuits relinquished in order to permit total committment to running. In the lives of participants, running had progressed from an activity of relatively low importance to one of paramount concern.

One area of particular interest involved the feelings of participants during and after running. While the runners reported dealing with thoughts about their bodies during the run, interview questions revealed that much attention was also focused on the external environment, or on nothing in particular. Morgan (Morgan, 1978; Morgan & Pollock, 1977) has indicated that elite runners associate with their bodily sensations during running in competition, in an effort to facilitate maximum performance. Non elite runners tend to dissociate, to think about anything other than the pain of the run. The runners in

this study indicated that they were both associators and dissociators, but that their primary coping strategies were built on dissociation. None of the participants in this study were elite competitors.

Reactions of participants to lack of opportunities for running are in keeping with considerations about exercise addiction described earlier in this paper. Included were feelings of anxiety, restlessness, discomfort and irritation. In the introduction, exercise addiction was defined as "addiction, of a psychological and/or physiological nature, upon a regular regimen of physical activity, characterized by withdrawal symptoms after 24-36 hours without exercise." Withdrawal symptoms appear to be the critical factor in exercise addiction and include both psychological and physiological components. Irrespective of distance, frequency, duration or speed of the run, psychophysiological responses to the "non run" condition appear to be common within so called addicted individuals, with psychological effects such as anxiety and guilt being predominant effects. The running addict may participate six or seven days a week, for long periods of time (one hour and more), and views running as an integral part of his/her existence. When participation is not possible, even for one day, reactions may be intense.

Exercise addiction appears to develop over a period of at least four to five months, but the precise qualitative and quantitative characteristics of the addicting activity remain to be determined. If exercise addiction is considered to be a positive phenomenon, as Glasser has suggested, then it might be profitable to foster its development in individuals desirous of achieving high levels of competitive running success. Knowing the extent and frequency of required participation,

and the most efficient strategies for cultivating addiction, would facilitate the design of exercise addiction programs. The construction of optimal physical environments for the development of exercise addiction (on the track, on the roads, in the woods, a combination of these) may therefore be an unaddressed challenge for the sport psychologist and coach.

There are other questions that are raised in this study. One is an examination of the thought processes involved in running, that affect the quality and performance of a run. There may be differences in the degree, or even type of addiction, among the running addicts studied in this investigation, and other exercise addicts, such as swimmers and exercise participants committed to calisthenics or weight training, for example. An additional area of interest involves the examination of peak experiences during running. Under what conditions do these occur and how can they be facilitated?

Ismail notes that (Milvy, 1977):

> "We are a highly tensed society who are actually on the verge of neuroticism, and we are climbing walls, and somehow there is an actual medicine called running, exercising, and jogging. We have to take advantage of this, and we've discovered that people who are involved in exercise do so continuously, regularly - everyone according to his ability, according to his capacity. They move from neuroticism to stability. Actually, they keep their hair loose and become less tense, more secure." (p. 1041).

Opportunties for the scientific study of exercise addiction are considerable, and the depth interview appears to be a useful procedure

in this type of research. The technique permits an examination of numerous dimensions related to exercise addiction, and investigation of thoughts and feelings of participants. There are seemingly few alternatives at this time to the use of depth interviews in the examination of concepts such as exercise addiction. Current questionnaires and inventories do not permit the breadth of examination that is offered in the depth interview.

More and more people are becoming "hooked on exercise," as Pargman and Burgess (note 2) have indicated. Much exciting research in this area will be seen in the future.

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Appendix A

How and why did you get into running in the first place?

How many years have you been running? What sort of successes and failures have you had? What sort of injury problems have you had to deal with?

Why do you run?

How do you view your role as a runner? Is it separated or integrated with the other roles you assume? What is the significance of the running role with respect to the other roles in your life?

What is your estimate of the importance of running in your life? How important is it to you?

What are your basic feelings while you run? What are your basic feelings when you finish running? What sort of feelings do you have when you don't or can't run?

What are the motivational considerations behind your running? What do you see as your future involvement in running?

How would you define the concept of exercise addiction? Do you see yourself as an exercise addict? How long did it take before you got the feeling of being an exercise addict?

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